

**PRESSURE SENSOR MONOLITHICALLY INTEGRATED
AND RELATIVE PROCESS OF FABRICATION**

Abstract of the Disclosure

A monolithically integrated pressure sensor is produced through micromechanical surface structure definition techniques. A microphone cavity in the semiconductor substrate may be monolithically formed by 5 plasma etching the front side or the back side of the silicon wafer to cut a plurality of trenches or holes deep enough to extend for at least part of its thickness into a doped buried layer of opposite type of conductivity of the substrate and of the epitaxial 10 layer grown over it. The method may also include electrochemically etching through such trenches, the silicon of the buried layer with an electrolytic solution suitable for selectively etching the doped silicon of the opposite type of conductivity, thereby 15 making the silicon of the buried layer porous. The method may also include oxidizing and leaching away the silicon so made porous.

10014880-121101